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REPORT OF THE ECONOMIC AND SOCIAL COUNCIL

ECONOMIC AND SOCIAL COUNCIL
Substantive session of 1994
Agenda item 8
PERMANENT SOVEREIGNTY OVER NATIONAL RESOURCES IN THE OCCUPIED PALESTINIAN AND OTHER ARAB TERRITORIES

Economic and social repercussions of the Israeli settlements on the Palestinian people in the Palestinian territory, including Jerusalem, occupied since 1967, and on the Arab population of the Syrian Golan

Note by the Secretary-General

In its resolution 1993/52 of 29 July 1993, entitled "Economic and social repercussions of the Israeli settlements on the Palestinian people in the Palestinian territory, including Jerusalem, occupied since 1967, and on the Arab population of the occupied Syrian Golan", the Economic and Social Council requested the Secretary-General to submit to the General Assembly at its forty-ninth session, through the Council, a report on the implementation of the resolution. The General Assembly, in its resolution 48/212 of 21 December 1993, repeated that request. The Secretary-General has the honour to submit to the members of the Assembly and the Council the annexed report, which was prepared by the Economic and Social Commission for Western Asia (ESCWA).

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* A/49/50/Rev.1.

ANNEX

Economic and social consequences of the establishment of settlements by Israel in the Palestinian territory, including Jerusalem, occupied since 1967, and the Syrian Golan

Report prepared by the Economic and Social Commission for Western Asia

1. The establishment of Israeli settlements in the Palestinian and other Arab territories occupied since 1967 has been the subject of various resolutions of the Security Council and the General Assembly. In its resolution 446 (1979) of 22 March 1979, the Security Council determined that the Israeli policy and practice of establishing settlements in those territories had no legal validity and constituted a serious obstruction to achieving a comprehensive, just and lasting peace in the Middle East. That position was reaffirmed unanimously in Security Council resolution 465 (1980) of 1 March 1980, in the preamble of which the Council took into account the need to consider measures for the impartial protection of private and public land and property, and water resources, and affirmed the applicability of the Geneva Convention relative to the Protection of Civilian Persons in Time of War, of 12 August 1949, 1/ to the Arab territories occupied by Israel since 1967, including Jerusalem. In 1980, the International Labour Conference also expressed concern regarding the establishment of settlements and called for an end to that policy, as well as the dismantling of existing settlements.

2. At its forty-eighth session, in 1993, the General Assembly, taking note of the reports of the Special Committee to Investigate Israeli Practices Affecting the Human Rights of the Palestinian People and Other Arabs of the Occupied Territories (A/48/96, A/48/278 and A/48/557), adopted resolution 48/41 of 10 December 1993, in which it strongly condemned the continued and persistent violation by Israel of the Geneva Convention and reaffirmed that the Israeli settlements in the occupied Palestinian territory, including Jerusalem, and the other Arab territories occupied by Israel since 1967 were illegal and an obstacle to peace.

3. The General Assembly, in its resolution 48/212 of 21 December 1993, took note of the report of the Secretary-General on the economic and social consequences of the establishment of settlements by Israel in the Palestinian territory, including Jerusalem, occupied since 1967, and the Syrian Golan (A/48/188-E/1993/78); recognized the economic and social repercussions of the Israeli settlements on the Palestinian people in the Palestinian territory occupied by Israel since 1967, including Jerusalem, and on the Arab population of the Syrian Golan; reaffirmed the inalienable right of the Palestinian people and the population of the Syrian Golan to their natural and all other economic resources, and regarded any infringement thereof as being illegal; and requested the Secretary-General to submit to the Assembly at its forty-ninth session, through the Economic and Social Council, a report on the progress made in the implementation of the resolution. The present report is submitted in response to that resolution.

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4. Shortly after the Six Day War in 1967, Israel established the first settlement in the Syrian Golan. Since that time, that policy has been developed more or less intensively and has accelerated since the beginning of 1990. 2/ Financial and tax incentives offered by the Government encourage settlers to make their homes in the occupied Arab territories.

5. The signature on 13 September 1993 by the Government of Israel and the Palestine Liberation Organization of the Declaration of Principles on Interim Self-Government Arrangements (A/48/486-S/26560, annex) is the most important political event that has characterized Israeli-Palestinian relations during the past year. The Declaration states in its article I that the aim of the Israeli-Palestinian negotiations is "to establish a Palestinian Interim Self-Government Authority, the elected Council ... for the Palestinian people in the West Bank and the Gaza Strip, for a transitional period not exceeding five years, leading to a permanent settlement based on Security Council resolutions 242 (1967) and 338 (1973)". The issue of settlements, in this Declaration, was deferred to the permanent status negotiations phase, which should start not later than the beginning of the third year of the interim period.

6. The massacre of Palestinians in the Ibrahimi Mosque in Hebron on 25 February 1994 gave the issue of settlements new importance and made it necessary to find remedial actions in order at least to alleviate the dangers threatening the security of the Arab residents, especially in view of the fact that Israeli settlers are generally well-armed. The Security Council, in its resolution 904 (1994) of 18 March 1994, strongly condemned the massacre in Hebron and its aftermath, which took the lives of more than 50 Palestinian civilians and injured several hundred others; and called for measures to be taken to guarantee the safety and protection of the Palestinian civilians throughout the occupied territory, including, inter alia, a temporary international or foreign presence, which was provided for in the Declaration of Principles, within the context of the ongoing peace process.

7. In July 1992, Israeli Prime Minister Yitzhak Rabin announced that his Government would change Israeli national priorities by focusing on the absorption of Jewish immigrants and curtailing the building of settlements in the West Bank and Gaza Strip, but not East Jerusalem. A distinction was made between political settlements and security settlements, of which the former would no longer be supported by the Government. During a debate in the Israeli Knesset, Mr. Rabin elaborated on this distinction by declaring that future settlement policy would not affect Greater Jerusalem or the borders with Jordan and the Syrian Arab Republic.

8. Statistics from the field during the second quarter of 1993 show that the Rabin Government remained committed to the construction of 11,000 publicly financed dwellings in the West Bank (excluding East Jerusalem) and Gaza and another 13,000 in East Jerusalem, in addition to 1,200 to 1,500 units undertaken by the private sector. 3/

9. The United States Administration, which had earlier approved the Israeli request for US$ 10 billion in loan guarantees, in annual instalments of $2 billion from 1993 to 1997, was obliged to decrease its loan for 1994 by $437 million in order to deduct the amount the Administration calculated the

Israelis had spent on settlements in the occupied territories for fiscal year 1993. 4/ The United States Administration was obliged to add $6 million to the budget presented by the Government of Israel to provide for the amount Israel spent on East Jerusalem settlements. 5/

10. The expansion of Israeli settlement activities in the occupied Arab territories has continued despite the drop in Jewish immigration from Eastern Europe. It is well known that only 456,220 Soviet Jews arrived in Israel from 1990 to 1993, 6/ far below the 1 million immigrants estimated by Israel for the period from 1990 to 1994. Recent studies estimate that only around 530,000 Soviet Jews will be arriving in Israel during that period, and another 204,000 to 275,000 between 1994 and 1999. 7/

11. Construction continued although there were considerable numbers of unsold apartments in the settlements of the West Bank and Gaza. It is estimated that some 44,000 completed apartments remained unsold during 1993. The Rabin Government may be obliged to purchase those apartments nationwide at an estimated cost of $1.1 billion. 8/

12. Settling in East Jerusalem is of special importance. It is to be noted, firstly, that the Knesset on 30 July 1980 passed the "Jerusalem Law", reaffirming the 1967 de facto annexation and declaring the "complete and united Jerusalem" the capital of Israel. 9/ Secondly, there is the continuing expansion of the municipal borders of "Greater Jerusalem", covering both the east and west sides of the city. The term "Greater Jerusalem" has come to include a much larger area of the West Bank than it did two decades ago. Explains a former member of the Jerusalem City Council: "The area from Ramallah in the north to Bethlehem in the south, Maaleh Adumim in the east, and Mevasseret [an Israeli suburb of Jerusalem] in the west is one metropolitan area". 10/

13. Both the Likud and Labour parties consider "United Jerusalem" to be the capital of Israel. The newly elected mayor of Jerusalem, Mr. Ehud Olmert, has declared his intention to administer Jerusalem on the understanding that the city is under Israeli rule and sovereignty. Though he cannot decide on the political future of the city (that is the responsibility of the Government), he "can make things happen on the ground, like building along the old border and creating continuity of Jewish settlement in East Jerusalem". 11/ Commenting on these practices, Mr. Haidar Abdel Shafi, the former head of the Palestinian delegation to the Washington peace talks, warned against this policy of *fait accompli*, which undermines the future establishment of a Palestinian State: "In two or three years it might be too late to set up a Palestinian State because of the policy of continued settlement building around Jerusalem". 12/

14. Two sets of statistics are particularly important for the demography of East Jerusalem. The first shows the continuous settling of new immigrants in that part of the city, where it is estimated that, during the period from 1990 to 1994, around 4 per cent of all immigrants arriving in Israel will have settled. Table 1 shows immigration to Israel by area of residence.

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Table 1. Immigration to Israel

Year	National	Jerusalem	East Jerusalem
1990	199 578	13 418	7 700
1991	156 168	11 835	6 813
1992	81 483	7 131	3 335

Source: Foundation for Middle East Peace, Report on Israeli Settlement in the Occupied Territories, Washington, D.C., May 1993, p. 5.

15. The second set of statistics shows the increasing presence of Israeli settlers, whose number in 1993 almost matched the Arab majority in East Jerusalem for the first time. Table 2 shows the population of the east and west parts of Jerusalem in 1967, 1990 and 1993.

Table 2. Population of Jerusalem, 1967-1993 a/

	1967	1990	1993
Israelis	196 400	379 000	400 000
Palestinians (Israeli estimates)	70 000	146 000	155 000 b/
Total population	266 000	525 000	555 000
Israelis in East Jerusalem	-	120 000	160 000

Source: Foundation for Middle East Peace, Report on Israeli Settlement in the Occupied Territories, Washington, D.C., September 1993, p. 6.

a/ Includes East Jerusalem, annexed in 1967.

b/ This figure rises to 180,000 when the 25,000 Palestinians lacking Jerusalem identity documents are accounted for.

16. In 1993, there were some 300,000 Israeli settlers in the occupied Arab territories distributed as follows: 160,000 in East Jerusalem; 120,000 in the rest of the West Bank; 4,500 in the Gaza Strip; and 12,000 in the Golan Heights. This represents a growth of at least 20,000 in the number of settlers in East Jerusalem, while the number in the Gaza Strip and the rest of the West Bank remained constant. For the Golan Heights, the figures indicate a slight reduction in the settler population (see A/48/188-E/1993/78, p. 3). The

settlers were distributed among 211 settlements, with an average of 1,405 settlers per settlement. The small number of settlers per settlement in the Gaza Strip (281) and the Golan Heights (333) is in contrast with the "populated" settlements in East Jerusalem (17,778). Finally, it should be noted that settlers formed less than 15 per cent of the total population in the occupied territories, varying from a low of 0.5 per cent in Gaza to 12 per cent in the West Bank and 88.9 per cent in East Jerusalem. Table 3 shows the number of settlers and settlements by geographical region.

Table 3. Number of settlers and settlements by geographical region

	West Bank (excluding East Jerusalem)	East Jerusalem	West Bank (subtotal)	Gaza	Golan Heights	Total
Israeli settlements	150	9	159	16	36	211
Israeli settlers	120 000	160 000	280 000	4 500	12 000	296 500
Average (settlers/ settlement)	800	17 778	1 761	281	333	1 405
Arab population	1 000 000	180 000	1 180 000	830 000	15 000	2 015 000
Percentage of settlers/ total population	12.0	88.9	23.7	0.5	80.0	14.7

Source: Based on information in the Report on Israeli Settlement in the Occupied Territories, Foundation for Middle East Peace, Washington, D.C., November 1993, p. 5.

17. In the Syrian Golan, the first Israeli settlement, Merom Golan, was established on 15 July 1967. The Golan had been depopulated by the 1967 war. Only 15,000 inhabitants in the region's north-east corner remained from a pre-war population of 130,000. The occupation authorities have enacted a series of laws, decrees and regulations on the basis of which the Israeli military authorities have seized 80 per cent of the total area of the occupied Syrian Golan and have built 36 settlements, in addition to numerous military and paramilitary settlements, the construction of which was not enclosed.

18. Contrary to the expectations that arose following the start of the peace process and the signing of the Declaration of Principles in Washington, D.C., on 13 September 1993, Israel has continued its practices of land confiscation for the purpose of expanding the settlements and construction of roads to connect those settlements. The long-term curfews imposed on various areas of the occupied Arab territories in order to prevent clashes between Palestinians and Israeli settlers have greatly affected the agricultural sector. Fishing has also been affected by the Israeli settlements and by the curfews imposed on the Gaza Strip. The establishment of seaside settlements in the Gaza Strip has reduced the area used for fishing since fishing opposite or near the settlements is not allowed. 13/

19. Under the excuse of "security requirements", Israeli authorities have engaged in the unprecedented practice of uprooting fruit trees (especially olive trees), thereby depriving farmers of their main source of income and forcing them to leave their land. The same practice is followed in the occupied Syrian Golan, where Israelis also uproot fruit-tree seedlings planted by Arab farmers. The excuse given by Israel is that permits to plant the seedlings were not obtained from Israeli authorities.

20. During the period from 13 September to 31 December 1993 (i.e. the three and a half months following the signing of the Palestinian-Israeli Declaration of Principles in Washington, D.C.), the following cases were reported: 14/

(a) Over 46,000 dunums of land were confiscated in the West Bank, mostly along the Green Line and around Jerusalem, of which 2,800 dunums were devoted to expansion of settlements;

(b) A total of 5,540 fruit trees, mostly olive trees, were uprooted;

(c) Eight new roads were constructed on Palestinian land for the purpose of connecting Israeli settlements;

(d) Over 5,000 dunums were confiscated for the purpose of establishing a parking lot, a garbage dump, a stone mill and a water tank to serve the Israeli settlements in the occupied Palestinian territories, and 5,520 dunums were confiscated for the establishment of two private investment projects for settlers in the Hebron area;

(e) Eight new nature reserves in the West Bank were initiated as a first step towards closing the land to Palestinians.

21. Along with land confiscation, water continues to be one of the most sensitive issues affecting the economic and social development of the people in the occupied Arab territories. A series of military orders has been issued by the Israeli military governors in the occupied West Bank, the Gaza Strip and the Syrian Golan. Those orders have established rules and regulations for the extraction, consumption, sale and distribution of water, control of water use, water-sharing and rationing, construction of water installations, drilling of wells, granting of permits and all matters regarding water resources, whether groundwater or surface water, including springs, ponds, streams and rivers, as well as the setting of prices and allowable quantities for use by Arab inhabitants and farmers in the occupied territories. Those orders have made it easier for Israeli authorities and settlers to seize and utilize water in the occupied territories. 15/

22. As a result, the water resources in the occupied Arab territories are utilized mainly in favour of the occupying Power. Two thirds of Israeli water supplies are derived from the West Bank and Gaza Strip. Moreover, severe restrictions have been imposed on the population in the Palestinian territories occupied since 1967. 16/ In the West Bank, not only is Israel exploiting water for its own population in Israel and in the West Bank, it is also limiting the Palestinians' increase in water use to 20 per cent beyond the amount used in 1967. Furthermore, that water is strictly for personal use, not for

agricultural or economic development. Maintaining such a status has hampered economic development in the occupied Arab territories.

23. The amount of water transferred from the West Bank and the Gaza Strip to Israel and its settlements in the occupied West Bank and the Gaza Strip (from groundwater through artesian wells and from the Jordan River) is estimated at 515 to 530 million cubic metres per year out of a total West Bank water supply of about 700 million cubic metres annually. The annual water consumption of Israeli settlers in the occupied Arab territories is estimated at 1,760 million cubic metres, while 230 million are consumed by the Palestinians in the occupied Palestinian territories. 17/ The combination of the water distribution policy and overpumping in some areas has severely strained the availability of Palestinian water resources and their ability to meet their growing needs. In the Gaza Strip, increased salinity due to sea-water intrusion has occurred as a result of Israel's excessive use of water for the settlements.

24. The security situation of Arab residents in the occupied Arab territories is tenuous at best. The massacre at the Ibrahimi Mosque in Hebron in February 1994 was a manifestation of the serious threat constituted by the Israeli settlements and especially the settlers, who are generally well-armed. The fact that settlements have been established in the heart of Arab cities aggravates the security situation of the Arab residents. The Security Council, recognizing the importance and gravity of the situation, called for a temporary international or foreign presence in Hebron.

Notes

1/ United Nations, Treaty Series, vol. 75, No. 973.

2/ Clyde Mark, "Soviet Jewish Emigration", CRS Issue Brief, Congressional Research Service, Library of Congress, Washington, D.C., 1994.

3/ Foundation for Middle East Peace, Report on Israeli Settlement in the Occupied Territories, Washington, D.C., May 1993, p. 3.

4/ Larry Q. Nowels and Clyde Mark, "Israel's Request for U.S. Loan Guarantees", CRS Issue Brief, Congressional Research Service, Library of Congress, Washington, D.C., 1994, p. 1.

5/ Foundation for Middle East Peace, Report on Israeli Settlement in the Occupied Territories, Washington, D.C., January 1994, p. 5.

6/ Clyde Mark, 1994, "Soviet Jewish Emigration", CRS Issue Brief, Congressional Research Service, Library of Congress, Washington, D.C., p. 14.

7/ George Kossaifi, Soviet Jewish Migration: Some Basic Issues, Institute of Palestine Studies, p. 48 (forthcoming); Brym, Robert J., "The Emigration Potential of Jews in the Former Soviet Union", in East European Jewish Affairs, vol. 23, No. 2, Winter 1993, p. 23.

8/ Foundation for Middle East Peace, Report on Israeli Settlement in the Occupied Territories, Washington, D.C., May 1993, p. 3.

9/ Ibid., February 1994, p. 1.

10/ Ibid., p. 3.

11/ Ibid., March 1994, p. 3.

12/ Ibid., February 1994, p. 3.

13/ The present report was written before the implementation agreement was signed at Cairo on 4 May 1994 (see A/49/180-S/1994/727), which provides for fishing rights for Palestinians along the Gaza coast.

14/ Palestine Human Rights Information Centre; Land Research Committee; Palestine Geographic Research Information Centre and Society of St. Yves (joint statement), "Land Confiscation and Settlement Building Accelerate after Israel-PLO Agreement on Declaration of Principles", Jerusalem, 24 January 1994.

15/ Department of the Affairs of the Occupied Homeland, Israeli Designs on West Bank Water, Study No. 1, Amman, Ibn Rushd Publishers and Distributors, 1987, pp. 16-31 (in Arabic).

16/ Miriam Lowi, "Water and Power: the Politics of a Scarce Resource in the Jordan River Basin", Cambridge University Press, Cambridge, Massachusetts, United States of America, 1993.

17/ United Nations, Economic and Social Commission for Western Asia, Rehabilitation of the Agricultural Sector in the Occupied Palestinian Territories (E/ESCWA/AGR/1993/9).

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ECONOMIC AND ENVIRONMENTAL QUESTIONS: CARTOGRAPHY

Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific

Report of the Secretary-General

SUMMARY

The Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific was convened in accordance with Economic and Social Council decision 1991/222. The Conference, which was held in Beijing from 9 to 18 May 1994 focused on recent technological achievements in cartography and related fields and their applications and impact on economic and social development. Particular attention was paid to human resources development, regional cooperation and coordination, and technology transfer.

Acknowledging both technological advances and the enhanced role of cartographic applications, the Thirteenth Conference, a turning-point for United Nations Regional Cartographic Conferences for Asia and the Pacific, reappraised the goals of cartography and related techniques and, consequently, those of national cartographic surveys to meet the "sustainability challenge" of the twenty-first century. It was felt that cartographic technologies could successfully contribute to the management priorities of Governments as well as to the welfare expectations of the people.

Bearing in mind the important contribution made by the United Nations Regional Cartographic Conferences for Asia and the Pacific to the regional cartographic community, the participants recommended that the Economic and Social Council should convene the Fourteenth Conference for Asia and the Pacific in mid-1997. It would focus primarily on the contribution of surveying and mapping and charting in support of the implementation of Agenda 21.

* E/1994/100.

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INTRODUCTION

1. The Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific was convened, in accordance with Economic and Social Council decision 1991/222, in Beijing from 9 to 18 May 1994. The Government of China hosted the Conference through the National Bureau of Surveying and Mapping. The Conference was attended by 204 representatives and observers from 36 countries and territories 1/ and 4 international scientific organizations. 2/ The Conference elected the representative of China as President.

2. The Conference has been recognized as a focal point for technical cooperation, technology transfer and programme coordination for the countries of the Asia and Pacific region. The agenda of the Thirteenth Conference reflected that role and was designed to address the specific needs and requirements of an economically fast-growing region. Rather than reporting on past achievements, the agenda was forward-looking. In view of the impact of new technology, and its relationship to policy, economic and social development and progress in surveying, mapping and charting, the Conference addressed four major topics:

1. Current status and issues of surveying, mapping and charting on the national level: needs and requirements versus reality in the region;

2. New trends in technology and their applications;

3. Human resources development;

4. Regional cooperation and technology transfer.

3. The work of the Conference was organized around four technical committees. As recommended, there was no specific agenda item for the country reports. National programmes were none the less addressed in the technical committees as they related to the topics considered by those committees. The Conference considered a full range of subjects pertinent to cartography as defined by the United Nations: geodesy, surveying and mapping, hydrography, photogrammetry and remote sensing, digital databases, and Geographic and Land Information Systems (GIS/LIS). Committee I, on cartographic data acquisition and supporting activities, was chaired by the representative of the Philippines; Committee II, on cartographic data manipulation, by the representative of Malaysia; Committee III, on cartographic data depiction, by the representative of Indonesia; and Committee IV, on issues related to human resources development, regional cooperation and technology transfer, by the representative of Viet Nam. The Conference adopted 20 draft resolutions under three headings: general policy, transfer of technology and institutional issues.

4. The proceedings of the Conference will be issued in two volumes. Volume I will contain the report of the Conference, including the resolutions adopted. Volume II will contain the technical papers presented at the Conference.

I. FINDINGS

5. There was extensive discussion of new technologies and their applications, particularly in the field of geodesy, digital databases and Geographic and Land Information Systems (GIS/LIS), which were becoming more and more relevant to the needs of civilian users. The Conference also felt the need to expand its horizons, to a more global perspective, beyond the exchange of technological information and the question of bilateral technology transfer. It was suggested that the Conference should help to apply the technology and information gathered for cartographic purposes to the elimination of poverty, strengthening of the strategy for sustainable development, relief from natural disasters and preservation of the environment, in support of Agenda 21.

6. According to the Conference, the use of the Global Positioning System (GPS) for establishing geodetic infrastructures was becoming the tool of choice, since it was the most cost-effective application of the currently available technology. Many papers highlighted the role of GPS-equipped monitoring stations and networks in measuring crustal deformation and plate motion to monitor and provide advance warning of earthquakes and for other natural disaster evaluation.

7. The need for modern cadastral systems was also stressed, since they were critical to land-resource management. Those systems supported an efficient land market, the provision of social justice, and efforts to improve productivity and facilitate the efficient management of the environment.

8. As regards navigational charting, it was pointed out that little progress had been achieved in the seven years since the Eleventh United Nations Regional Cartographic Conference for Asia and the Pacific. In the interest of navigational safety, marine resource management, maritime trading and the overall sustainable development of the region, it was felt that regional cooperation should be stepped up, with the United Nations, particularly the Economic and Social Commission for Asia and the Pacific (ESCAP), lending more vigorous support. The shortage of financial resources was regarded as the major impediment to the implementation of technical cooperation programmes in this sector. Several papers indicated that with GPS now providing accurate positioning data, and advanced computer systems able to handle large digital databases, it was possible to improve navigation safety as ship navigation moved into the digital environment. The need to adopt a geocentric reference system was stressed and recommendations were made to that effect.

9. There was some discussion of the contribution of space technology, particularly satellite remote-sensing systems, to cartographic uses. It was felt that satellite systems, although satisfying positional accuracy, were marginal with respect to detectability and height determination for use in topographic mapping. However, the merger of satellite and aerial image data with other GIS data would be a special challenge for mapping in the future. It was the opinion of some participants that in view of the current and future data acquisition possibilities, GIS development today was more of an institutional problem than a technical one. Finally, many participants believed that in spite of the impressive technical advances made by space technology, there were still

difficulties in obtaining appropriate environmental information in support of sustainable development.

10. It was noted that photogrammetric work-stations, used to transform aerial photographs into topographic maps, would become fully digital over time and would replace analytical plotters for topographic mapping.

11. Digital databases and Geographic and Land Information Systems (GIS/LIS) were of particular interest to the Conference. Some 21 technical and country papers addressed those topics in Committee III. It was noted that a large number of countries within the region had now launched national Geographic Information Systems, and some were already in the application stage. The Conference emphasized that international and bilateral cooperation were vehicles for the exchange of experience and a necessity for achieving standards for the development of regional and global databases. One of the papers submitted by the United Nations Secretariat 3/ stressed that the objective in developing a national or regional geographic data infrastructure was to efficiently provide the fundamental geographic data needed to support sound economic, social and environmental decision-making. GIS/LIS technology had the potential to achieve those benefits rapidly and in a cost-effective manner.

12. The Conference noted that the implementation of spatial data systems required setting certain standards (e.g. with regard to the database, transfer mechanisms and procedures). As a result of the evolving demand, many national surveys were more attentive in providing the data in a form that would better meet the needs of the users. Many papers described how surveys were responding to user needs by developing geographic databases as a major component of their country's geographic infrastructure. Noteworthy international and bilateral collaborative efforts were also reviewed. It was further emphasized that rapidly expanding urban agglomerations represented an especially urgent requirement for up-to-date integrated land information that could be used to design policies and development programmes for efficient use of urban land.

13. The need to set up a permanent regional GIS infrastructure committee for sharing experience was addressed by the Conference. The committee would bring together the heads of the national mapping and surveying organizations to discuss, select and agree on GIS standards, GIS infrastructure and institutional development, inter alia, and to establish links with related bodies in the rest of the world.

14. It was further noted that to address the challenge of environmental protection, geographic datasets should also include information on such issues as vegetation, soils, geology, climate and various economic indices.

15. The work of Committee IV, which dealt with human resources development and technical cooperation, was particularly important. The Conference felt that political decision makers lacked an appreciation of the role of map production in the economic and social development process. Consequently, national cartographers had less access to new technology. However, it was pointed out that as a result of the increased demand for "cartographic products", government-funded national surveys had a bright future, subject to good

leadership, adaptation to technological advances and increased financial self-reliance.

16. The reforms implemented by many countries of the Asia and Pacific region whose economies were in transition had compelled their Governments to reassess their human resource development policies and to align them with the requirements of a market economy. As cartographic techniques were developing quickly, many countries faced difficulties in keeping abreast of the more advanced technologies, and expertise enhancement was lagging. The Conference acknowledged the need to organize regional workshops regularly and provide expert advisory services with a strong involvement in the United Nations system, in collaboration with international scientific and professional organizations. Many countries indicated their willingness to step up regional cooperation and technology transfer. Natural disaster prediction and mitigation was cited as an area for increased cooperation. Many papers described ongoing technical cooperation projects and highlighted their successes as well as their implementation difficulties.

17. The issue of gender in cartography was also touched upon. The lack of representation of women at the Conference was noted as an example of a general situation whereby women faced difficulties in reaching the senior management level. However, some countries of the region pointed out that women cartographers, in substantial numbers, had attained middle management levels. Two papers made specific recommendations on how to encourage more women to enter the discipline.

18. The technical cooperation activities undertaken in the region by the United Nations Secretariat, through the Department for Development Support and Management Services were described. Against a background of changes in the way such cooperation was being provided, it was pointed out that funding for cartographic projects per se was becoming more limited. None the less, cartography was a critical tool in many United Nations funded projects which aimed at assisting developing countries and economies in transition in meeting the goals set by Agenda 21. In that regard an important paper entitled "The surveyor, the environment and Agenda 21", prepared by Peter Byrne, Vice-President, FIG, highlighted the role and contribution of cartographers in assisting in the protection and monitoring of the environment and in implementing Agenda 21.

19. It was noted that the lack of financial commitment was the principal reason for the low rate of implementation of the 33 resolutions adopted by the Twelfth United Nations Regional Cartographic Conference for Asia and the Pacific three years ago. The Conference further noted with concern that the least developed countries and other low-income developing countries were not adequately represented at the Thirteenth Conference. Those countries were encouraged to submit reports on their special needs along with their country reports.

20. As the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific was held shortly after the Global Conference on the Sustainable Development of Small Island Developing States (Barbados, 25 April-6 May 1994), the Thirteenth Conference took note of the specific needs to those environmentally vulnerable States and the critical contribution of cartography

in alleviating the potential for environmental damage and natural disasters. It also noted with regret that the participation of the small island States of the Pacific was very limited and stressed that future conferences should include specific agenda items relevant to the needs of such States.

21. The deliberations of the four committees confirmed that the advances in cartographic technology were steadily closing the gap with practical user requirements. The challenge for the cartographic community was to keep abreast of those advances and develop them into cost-effective applications in the wide field of surveying, mapping and charting. The task of the United Nations conferences was to promote those cartographic advances, through technical cooperation and technology transfer and to enhance specific user applications for the management priorities of the countries of the region.

22. A list of the 20 resolutions adopted by the Conference and the proposed provisional agenda for the Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific are contained in annexes I and II below.

II. RECOMMENDATIONS TO THE COUNCIL

23. In view of the important contributions made by cartographic technology and applications in the information stream to decision makers, planners and the public at large, and by the United Nations Regional Cartographic Conferences for Asia and the Pacific in strengthening technical cooperation and the transfer of technology within the countries of the region, the Conference recommends that the Economic and Social Council:

(a) Endorse its recommendation that the Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific should be convened for five working days in mid-1997, with the primary focus on the contribution of surveying, mapping and charting in support of the implementation of Agenda 21;

(b) Request the Secretary-General to take measures, where appropriate, to implement the other recommendations made by the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific; in particular, within available resources, the United Nations should continue to support surveying, mapping and charting activities in the Asia and Pacific region and inter alia facilitate the participation of the least developed countries and the small island developing States of the region.

Notes

1/ Australia, Azerbaijan, Bangladesh, Chile, China, Cyprus, Democratic People's Republic of Korea, Finland, Germany, Holy See, Hong Kong, India, Indonesia, Iraq, Japan, Malaysia, Marshall Islands, Mongolia, Nepal, Netherlands, New Zealand, Oman, Philippines, Portugal, Qatar, Republic of Korea, Russia, Saudi Arabia, Singapore, Thailand, Turkey, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Vanuatu, Viet Nam.

2/ International Cartographic Association (ICA), International Federation of Surveyors (FIG), International Hydrographic Organization (IHO), International Society for Photogrammetry and Remote Sensing (ISPRS).

3/ "Developing a national and regional geographic data infrastructure", prepared by Drew Clarke (FIG).

Annex I

RESOLUTIONS ADOPTED BY THE CONFERENCE a/

General policy

1. Support for surveying and mapping activities in the region
2. Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific
3. Attendance at future United Nations Regional Cartographic Conferences for Asia and the Pacific
4. Pacific Small Island Developing States
5. Access to information for development
6. The role of surveying, mapping and charting in the implementation of Agenda 21
7. Women in cartography

Transfer of technology

8. Adoption of a geocentric reference system
9. Hydrographic surveying and nautical charting
10. Cadastral surveying and mapping in Asia and the Pacific
11. National surveying and mapping authorities
12. GIS standardization
13. Capacity-building for Agenda 21
14. Legislation on surveying and mapping
15. Geographical names

Institutional issues

16. Establishment of a permanent regional GIS infrastructure committee
17. Geographic Information Systems and Land Information Systems (GIS/LIS)
18. Organizational development to meet Agenda 21

19. Institutional framework for geospatial data management

Vote of thanks

20. Vote of thanks to the Government of China.

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a/ The text of the resolutions will be included in Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific, vol. I, Report of the Conference.

Annex II

PROPOSED PROVISIONAL AGENDA FOR THE FOURTEENTH UNITED NATIONS REGIONAL CARTOGRAPHIC CONFERENCE FOR ASIA AND THE PACIFIC

1. Opening of the Conference.

2. Election of the President and other officers of the Conference.

3. Objectives of the Conference.

4. Organizational matters:

   (a) Adoption of the rules of procedure;

   (b) Adoption of the agenda;

   (c) Establishment of technical committees and election of Chairmen and Rapporteurs;

   (d) Organization of work;

   (e) Credentials of representatives to the Conference.

5. United Nations and country reports on the implementation of the resolutions of the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific.

6. Reports on the contribution of surveying, mapping and charting to the implementation of Agenda 21:

   (a) Environmental management, including management of the oceans, and disaster mitigation, reporting and documenting;

   (b) Public access to and exchange of information;

   (c) Land reform, land management and development;

   (d) Demography and human settlements policies;

   (e) Desertification and land degradation;

   (f) Human resources development;

   (g) Safety of maritime and air navigation, including hydrographic surveys and nautical charting;

   (h) Other applications of surveying and mapping to support the implementation of Agenda 21.

7. Reports on the regional implementation of the Programme of Action for the Sustainable Development of Small Island Developing States.

8. Policy on and management of national survey activities in the field of surveying and mapping.

9. Technical cooperation and transfer of technology.

10. Review of the achievements of the Conference and provisional agenda for the Fifteenth United Nations Regional Cartographic Conference for Asia and the Pacific.

11. Adoption of the report of the Conference.

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ECONOMIC AND ENVIRONMENTAL QUESTIONS: CARTOGRAPHY

Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific

Report of the Secretary-General

Addendum

Programme budget implications of the recommendations contained in paragraph 23 of document E/1994/74

1. In paragraph 23 (a) of the report of the Secretary-General on the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific (E/1994/74), the Conference recommended that the Economic and Social Council endorse the recommendation that the Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific should be convened in mid-1997.

2. As indicated in paragraph 23 (b), the Conference recommended that the Economic and Social Council request the Secretary-General to take measures, where appropriate, to implement the other recommendations made by the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific.

3. Activities such as those envisaged in the report of the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific are deemed to be of a continuing nature. In the medium-term plan for the period 1992-1997, they fall under chapter II, programme 19 (Natural resources), subprogramme 4 (Surveying, mapping and international cooperation in cartography), and in the programme budget under section 10 (Department for Development Support and

* E/1994/100.

Management Services). They have been included in the programme budgets for each biennial period covered by the medium-term plan. Consequently, no modifications to the programme of work approved for the biennium 1994-1995, or proposed for the biennium 1996-1997, are required.

4. It is anticipated that the activities recommended by the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific and those required for the preparation of the Fourteenth United Nations Regional Cartographic Conference for Asia and the Pacific are included in the medium-term plan for the period 1992-1997 and will be included in the proposed programme budget for the biennium 1996-1997. In respect of the latter, inclusion of these activities is not expected to give rise to additional expenditures since, as explained in the preceding paragraph, such activities are of a continuing nature and additional resources need not be sought for them every biennium.